Small Business Innovation Research/Small Business Tech Transfer

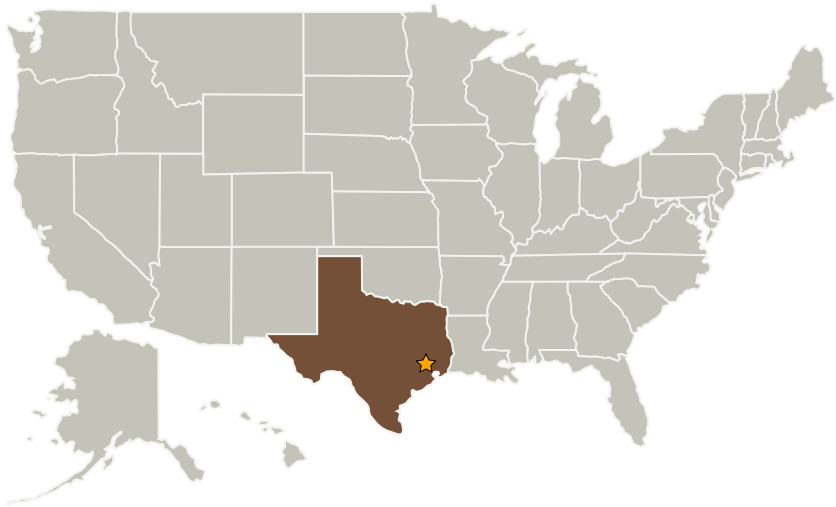
Single Electron Transistor Platform for Microgravity Proteomics, Phase II

Completed Technology Project (2005 - 2007)

Project Introduction

This Phase II program builds from the successful Phase I efforts to demonstrate that Quantum Logic Devices' nanoelectronic platform for biological detection could detect binding of Epo, TNF-alpha, IL-6, and IGF-1 in saline and serum without labels. The creation of an electronic "direct detection" platform for proteomics, enables rapid point of care monitoring of metabolic analytes in microgravity. This Phase II proposal will build working prototypes based on PDA-style electronic data capture with disposable assay cartridges for the analytes demonstrated in Phase I.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Johnson Space Center(JSC)	Lead Organization	NASA Center	Houston, Texas
Quantum Logic Devices	Supporting Organization	Industry	Georgetown, Texas

Primary U.S. Work Locations
Texas

Single Electron Transistor Platform for Microgravity Proteomics, Phase II

Table of Contents

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Johnson Space Center (JSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Single Electron Transistor Platform for Microgravity Proteomics, Phase II

Completed Technology Project (2005 - 2007)

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX05 Communications, Navigation, and Orbital Debris Tracking and Characterization Systems
  - TX05.5 Revolutionary Communications Technologies
    - TX05.5.3 Hybrid Radio and Optical Technologies